

WHAT IS CLAIMED IS :

1 – A radiation diversity antenna consisting of a radiating element
5 of the slot-line type coupled electromagnetically to a feed line, wherein the
radiating element consists of arms in a tree structure, each arm having a
length equal to $k\lambda_s/2$ where k is an identical or different integer from one arm
to the next and λ_s is the guided wavelength in the slot-line constituting the
10 arm, at least one of the arms comprising a switching means positioned in the
slot-line constituting the said arm in such a way as to control the coupling
between the arm and the feed line (6) as a function of a command.

2 – The antenna of claim 1, wherein each arm comprises a
switching means.

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3 – The antenna of claim 1, wherein the switching means is
positioned in an open-circuit zone of the slot.

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4 – The antenna of claim 2, wherein the switching means is
positioned in an open-circuit zone of the slot.

5 – The antenna of claim 1, wherein the switching means consists
of a diode, a transistor arranged as a diode or an MEMS (Micro Electro
Mechanical System).

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6 – The antenna of claim 1, wherein each arm has a length which
is delimited by an insert positioned in a short-circuit plane.

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7 – The antenna of claim 5, wherein the insert is placed at the
level of the junctions between arms.

8 – The antenna of claim 1, wherein the tree structure has an H or Y shape or one which is an association of these shapes.

9 – The antenna of claim 1, wherein the antenna is produced by
5 microstrip technology or by coplanar technology.

10 – The antenna of claim 1, wherein the length of the slot-lines is chosen so as to produce frequency diversity.

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IMPROVEMENT TO RADIATION DIVERSITY ANTENNAS

The present invention relates to a radiation diversity antenna consisting of radiating elements of the slot-line type coupled 5 electromagnetically to a feed line, in which the radiating elements (1,2,3,4,5,1a,1b) have a tree structure, each radiating element having a length equal to $k\lambda_s/2$ where k is an identical or different integer from one element to the next and λ_s is the guided wavelength in the slot-line constituting the radiating element with at least one radiating element 10 comprising a switching means (d1,d2,d3,d4,d'1) positioned in the slot-line constituting the said radiating element in such a way as to control the coupling between the said radiating element and the feed line (6) as a function of a command.

15 The invention applies chiefly to wireless transmissions.

Fig. 1